OCCUPATIONAL INJURIES AND ILLNESSES IN MISSOURI IN 2001

MANUFACTURING INDUSTRY DIVISION

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In Cooperation with: U.S. Department of Labor, Bureau of Labor Statistics Manufacturing was the major industry division with the highest nonfatal occupational injury and illness incidence rate in Missouri private industry in 2001. But the incidence rate was 10.1 (per 100 full-time workers) in 2001 reduced from 11.0 in 2000 and 12.0 in 1999. The incidence rates of nonfatal occupational injuries and illnesses by industry divisions in Missouri private industry in 2001 are shown in Table 1.

- Manufacturing had the highest incidence rates for total injury and illness cases, total lost workday injury and illness cases, total injury cases, and total lost workday injury cases.
- Manufacturing was the industry division with the highest percentage (25.8%) of nonfatal occupational injuries and illnesses involving days away from work in Missouri private industry in 2001.

Table 2 shows the incidence rates of nonfatal occupational injuries and illnesses by industry for Missouri private industry in 2001. Industries within the manufacturing industry division are listed by 2, 3, and 4-digit Standard Industrial Classification (SIC) codes. The industries are separated into durable goods manufacturing and nondurable goods manufacturing.

- Motor vehicles and car bodies (SIC 3711) was the industry with the highest nonfatal occupational injury and illness incidence rate at 39.3 (per 100 full-time workers).
- Motor vehicles and equipment (SIC 371) had the second highest nonfatal occupational injury and illness incidence rate at 26.8.
- Poultry slaughtering and processing (SIC 2015) was the industry with the third highest nonfatal occupational injury and illness incidence rate at 23.9.

The numbers of nonfatal occupational injuries and illnesses involving days away from work in the manufacturing industry division by selected characteristics are shown in Table 3 for 1996 to 2001 for Missouri private industry.

- The total number of nonfatal occupational injuries and illnesses involving days away from work in manufacturing are listed for each year from 1996 to 2001. The total numbers have decreased 36.9% from 1996 to 2001. There were 6,854 nonfatal occupational injuries and illnesses involving days away from work in 2001 down from 8,356 in 2000 and 10,855 in 1996.
- The numbers of nonfatal occupational injuries and illnesses involving days away from work for men and women workers are listed from 1996 to 2001. There was a 35.5% decrease in the number of injuries and illnesses involving days away from work in men workers from 1996 to 2001 and a 38.7% decrease in the number of injuries and illnesses in women workers in the same time period.
- The main occupations that experience nonfatal occupational injuries and illnesses in the manufacturing industry division are operators, fabricators, and laborers and precision production, craft, and repair. Between 1996 and 2001 there was a 41.4% decrease in the number of injuries and illnesses in the operators, fabricators, and laborers occupation and a 17.6% decrease in the number of injuries and illnesses in the precision production, craft, and repair occupation.

Table 4 shows the incidence rates of nonfatal occupational injuries and illnesses involving days away from work for each of the "Top Five" characteristics in the manufacturing industry division in Missouri private industry from 1996 to 2001. The incidence rates have decreased for the worker and case characteristics from 1996 to 2001 for all "Top Five" characteristics except carpal tunnel syndrome.

The "top five" nature of injury, illness characteristics in Missouri private industry manufacturing

in 2001 were sprains, strains; all other; cuts, lacerations, punctures; carpal tunnel syndrome; bruises, contusions; and fractures. Sprains, strains was the nature of injury or illness in 37.3% of all injury or illness cases in the manufacturing industry division in 2001. The incidence rate for sprains, strains has decreased 30.0% from 1996 to 2001. The manufacturing industry division accounted for 21.9% of the injury and illness cases in Missouri private industry in 2001 that sprains, strains, tears was listed as the nature.

- The "top five" part of body affected characteristics in Missouri private industry manufacturing in 2001 were upper extremities, trunk, back, lower extremities, and finger. Upper extremities was the part of body affected in 37.3% of the injury and illness cases in the manufacturing industry division in 2001. The incidence rate for upper extremities has decreased 21.8% from 1996 to 2001. The manufacturing industry division accounted for 37.7% of the injury and illnesses cases in Missouri private industry in 2001 that reported upper extremities as the part of body affected.
- The "top five" source of injury, illness characteristics in Missouri private industry manufacturing in 2001 were worker motion or position, parts and materials, machinery, all other, and containers. Worker motion or position was the source of injury, illness in 23.2% of the injury and illness cases in the manufacturing industry division in 2001. The incidence rate for worker motion or position has decreased 17.8% from 1996 to 2001. The manufacturing industry division accounted for 33.4% of the injury and illness cases in Missouri private industry in 2001 that reported worker motion or position as the source.
- The "top five" event or exposure characteristics in Missouri private industry manufacturing in 2001 were contact with object, equipment; overexertion; repetitive motion; overexertion in lifting; and caught in object, equipment, material. Contact with objects and equipment was the event or exposure in 30.2% of the injury and illness cases in the manufacturing industry division in 2001. The incidence rate for contact with object, equipment has decreased 36.7% from 1996 to 2001. The manufacturing industry division accounted for 31.2% of the injury and illness cases in Missouri private industry in 2001 that reported contact with objects and equipment as the event or exposure.

Manufacturing was the major industry division with the highest incidence rate (203.5 per 10,000 full-time workers) of total cases of nonfatal occupational illnesses in 2001 in Missouri private industry. The rate was reduced from 215.1 in 1999.

- 7,500 of the 11,900 nonfatal occupational illness cases in Missouri private industry in 2001 were in the manufacturing industry.
- Manufacturing was the industry division with the highest incidence rates in 2001 for total illness
 cases, poisoning, disorders due to physical agents, disorders associated with repeated trauma,
 and all other occupational illnesses.
- The nonfatal occupational illness incidence rates by manufacturing industry and category of illness in Missouri private industry in 2001 are shown in Table 5. The incidence rates represent the number of illnesses per 10,000 full-time workers. The incidence rates are listed for manufacturing industries by 2-digit SIC codes.
- Transportation equipment (SIC 37) had the highest incidence rate for total illness cases in 2001 at 664.8. This was a 10.5% increase from the 2000 incidence rate of 601.7.
- Food and kindred products (SIC 20) had the second highest incidence rate for total illness cases at 273.0. This was a 13.1% decrease from the 2000 incidence rate of 314.0.

Incidence rates¹ of nonfatal occupational injuries and illnesses by selected industries Table 1. and case types, 2001

Missouri

		Injuries an	d Illnesses		Injuries				
Industry ²		Lost work	day cases	Cases		Lost work	Cases		
	Total cases	Total³	With days away from work ⁴		Total cases	Total³	With days away from work ⁴	without lost work- days	
Private Industry⁵	6.1	2.8	1.4	3.3	5.5	2.5	1.3	3.0	
Agriculture, forestry, and fishing⁵	7.6	2.1	1.5	5.5	7.2	2.0	1.5	5.2	
Mining ⁶	5.3	3.3	2.1	2.0	5.1	3.1	2.0	2.0	
Construction	7.1	3.4	2.5	3.7	7.0	3.4	2.5	3.6	
Manufacturing	10.1	4.9	1.9	5.2	8.1	3.9	1.5	4.1	
Transportation and public utilities ⁷	6.8	3.8	2.4	3.0	6.5	3.7	2.3	2.8	
Wholesale and retail trade	5.3	2.3	1.3	3.1	5.1	2.2	1.2	3.0	
Finance, insurance, and real estate	1.8	0.7	0.5	1.1	1.6	0.6	0.4	0.9	
Services	5.0	2.0	0.9	3.0	4.6	1.9	0.8	2.7	

¹ Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000 where

Ν = number of injuries and illnesses

= total hours worked by all employees during the calendar year 200,000 = base for 100 equivalent full-time workers

(working 40 hours per week, 50 weeks per year).

Mining (Division B in the Standard Industrial Classification Manual, 1987 Edition) include establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas

NOTE: Because of rounding, components may not add to totals. n.e.c. = not elsewhere classified.

-- Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State agencies.

² Totals include data for industries not shown separately.

³ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

⁴ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁵ Excludes farms with fewer than 11 employees.

⁶ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries. Data for

Data conforming to OSHA definitions for employers in railroad transportation are provided to BLS by the Federal Railroad Administration, U.S. Department of Transportation.

Incidence rates¹ of nonfatal occupational injuries and illnesses by industry Table 2. and selected case types, 2001

Missouri

			Injuries an	d Illnesses		Injuries				
Industry ²	SIC code ³		Lost work	day cases	Cases		Lost workday cases		Cases	
		Total cases	Total⁴	With days away from work ⁵	without lost work- days	Total cases	Total⁴	With days away from work ⁵	without lost work- days	
Drivento Inductor fi		6.4	2.0	1.4	2.2	F F	2.5	4.0	2.0	
Private Industry ⁶		6.1	2.8	1.4	3.3	5.5	2.5	1.3	3.0	
Manufacturing		10.1	4.9	1.9	5.2	8.1	3.9	1.5	4.1	
		-			-			-		
Durable goods		11.5	5.5	2.2	6.0	9.0	4.3	1.8	4.7	
Lumber and wood products	24	9.6	5.7	4.1	3.9	9.4	5.6	4.0	3.8	
Furniture and fixtures	25	11.1	6.7	3.2	4.4	9.1	5.6	2.6	3.5	
Household furniture	251	12.0	6.6	2.4	5.4	10.2	5.5	1.9	4.7	
Stone, clay, and glass products	32	10.4	4.6	3.0	5.9	9.3	4.4	2.8	4.9	
Concrete, gypsum, and plaster products Primary metal industries	327	8.6 11.7	4.3 7.1	3.1 2.9	4.3 4.6	8.1 10.4	4.2 6.2	3.0 2.4	3.9 4.2	
Fabricated metal products	34	9.1	4.3	2.9	4.8	8.1	3.8	1.7	4.2	
Miscellaneous fabricated metal products	349	9.5	5.8	2.5	3.7	7.9	4.9	1.9	3.0	
Industrial machinery and equipment	35	9.3	3.9	1.7	5.4	8.4	3.3	1.4	5.1	
Metalworking machinery	354	5.9	1.8	0.7	4.2	5.4	1.7	0.6	3.7	
Refrigeration and service machinery	358	12.4	6.2	2.0	6.2	10.7	4.9	1.6	5.8	
Refrigeration and heating equipment	3585	13.8	6.9	2.2	6.9	11.8	5.3	1.7	6.5	
Industrial machinery, n.e.c.	359	13.6	3.7	1.3	9.9	12.5	3.4	1.2	9.1	
Electronic and other electric equipment	36	6.8	3.6	1.1	3.2	5.3	2.7	8.0	2.6	
Household appliances	363	4.7	1.5	0.4	3.1	4.1	1.3		2.8	
Electric lighting and wiring equipment Miscellaneous electrical equipment and supplies	364	11.6 7.1	6.1 2.7	0.5 1.4	5.5	8.7 4.6	4.2		4.4	
Transportation equipment	369	19.4	8.6	2.8	4.3 10.9	12.8	1.5 5.7	0.5 1.9	3.1 7.1	
Motor vehicles and equipment	371	26.8	11.8	3.6	15.0	16.2	7.1	2.2	9.0	
Motor vehicles and car bodies	3711	39.3	17.1	5.0	22.2	21.8	9.7	2.8	12.1	
Motor vehicle parts and accessories	3714	10.9	5.0	1.8	5.9	9.3	3.8	1.6	5.4	
Instruments and related products	38	5.3	2.6	0.7	2.7	4.6	2.4	0.6	2.2	
Miscellaneous manufacturing industries	39	6.0	3.6	1.1	2.4	5.3	3.2	1.0	2.1	
Nondurable goods		8.2	4.2	1.3	4.0	6.7	3.4	1.2	3.3	
Food and kindred products	20	10.5	5.7	1.5	4.8	7.8	4.1	1.4	3.6	
Meat products Poultry slaughtering and processing	201	19.8 23.9	11.1 13.3	1.5	8.7 10.6	12.5 14.6	6.8	1.2	5.7	
Poultry slaughtering and processing Dairy products	2015	10.4	6.7	1.1 3.2	3.7	9.7	7.6 6.1	0.8 3.1	6.9 3.6	
Grain mill products	202	4.5	2.8	1.6	1.7	4.3	2.7	1.5	1.6	
Printing and publishing	27	4.2	2.0	0.9	2.3	4.0	1.9	0.9	2.1	
Newspapers	271	4.7	2.0	0.8	2.7	4.4	1.9	0.8	2.4	
Commercial printing	275	5.3	2.9	1.5	2.5	5.1	2.7	1.5	2.4	
Chemicals and allied products	28	4.1	2.2	0.8	1.9	3.3	1.8	0.6	1.5	
Rubber and miscellaneous plastics products	30	9.7	4.1	1.8	5.6	8.0	3.4	1.6	4.6	

¹ Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000 where

Ν = number of injuries and illnesses

EΗ = total hours worked by all employees during the calendar year

200,000 = base for 100 equivalent full-time workers

(working 40 hours per week, 50 weeks per year).

NOTE: Because of rounding, components may not add to totals.

n.e.c. = not elsewhere classified.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State agencies.

² Totals include data for industries not shown separately.

Standard Industrial Classification Manual, 1987 Edition.

⁴ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

⁵ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁶ Excludes farms with fewer than 11 employees.

⁻⁻ Indicates data not available.

Table 3. Number of nonfatal occupational injuries and illnesses involving days away from work¹ by selected worker characteristics and Manufacturing industry division,
Missouri, private industry, 1996-2001

Characteristics	Private industry ^{2,3,4,5}						
	2001	1996	1997	1998	1999	2000	2001
Total:	26,596	10,855	10,148	9,332	10,359	8,356	6,854
Sex:							
Men	17,629	7,760	7,659	7,215	7,726	5,973	5,007
Women	8,857	3,012	2,447	2,112	2,630	2,343	1,846
Occupation:							
Managerial and professional	1,286	102	143	137	76	60	57
Technical, sales, and administrative support	4,350	428	455	490	537	355	361
Service	4,155	122	157	120	148	117	116
Faming, forestry, and fishing	399				13	23	
Precision production, craft, and repair	5,988	1,711	1,357	1,433	1,765	2,106	1,410
Operators, fabricators, and laborers	10,415	8,377	7,926	7,008	7,809	5,651	4,908

Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

result, the 1996 and later estimates for these SIC's and Major Industry Groups 42, 45, and 47 are not comparable to those for prior years. In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for prior years.

NOTE: Because of rounding and data exclusion of nonclassifiable responses, data may not sum to the totals. Dashes indicate data that do not meet publication guidelines. The scientifically selected probability sample used in each year was one of many possible samples, each of which could have produced different estimates. A measure of sampling variability for each estimate is available upon request.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State Agencies.

 $^{^{\}scriptscriptstyle 2}\,$ Excludes farms with fewer than 11 employees.

³ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries. Data for Mining (Division B in the Standard Industrial Classification Manual, 1987 Edition) include establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.

⁴ Data conforming to OSHA definitions for employers in railroad transportation are provided to BLS by the Federal Railroad Administration, U.S. Department of Transportation.

In 1996, air courier operations previously classified in Industry Groups 421, 422, 423, 452, 473, and 478 were reclassified to Industry Group 451. As a

Table 4. Incidence rates¹ of nonfatal occupational injuries and illnesses involving days away from work² by "Top Five" worker and case characteristics and Manufacturing industry division, Missouri, private industry, 1996-2001

Characteristics	Private industry ^{3,4,5,6}			cturing			
	2001	1996	1997	1998	1999	2000	2001
Total:	137.4	263.6	243.2	223.3	257.4	212.7	185.6
Nature of injury, illness:							
Sprains, strains	60.2	98.8	96.1	82.4	104.7	75.4	69.2
All other	20.1	36.5	40.7	41.7	48.2	38.9	30.4
Cuts, lacerations, punctures	10.8	27.2	23.7	23.1	24.7	17.1	18.9
Carpal tunnel syndrome	5.5	12.0	13.1	10.4	16.6	12.5	15.9
Bruises, contusions	11.4	24.0	21.0	23.0	17.9	18.9	13.6
Fractures	13.5	20.8	16.6	13.3	14.2	16.4	13.6
Part of body affected:							
Upper extremities	35.0	88.5	87.1	81.0	90.2	70.2	69.2
Trunk	50.0	94.0	81.7	70.5	88.3	73.6	58.5
Back	29.1	55.3	48.1	35.5	47.5	41.4	32.4
Lower extremities	27.7	42.9	40.5	36.0	40.7	36.4	27.8
Finger	12.0	32.6	28.9	36.5	31.7	24.0	25.8
Source of injury, illness:							
Worker motion or position	24.5	52.3	57.8	44.2	61.2	49.6	43.0
Parts and materials	17.8	56.2	49.2	50.2	51.8	39.6	32.8
Machinery	10.0	30.8	25.4	30.0	31.0	24.3	25.1
All other	17.6	22.7	20.6	22.2	25.7	25.6	22.1
Containers	15.2	37.9	27.4	23.7	28.6	23.5	17.6
Event or exposure:							
Contact with object, equipment	34.2	88.4	74.8	81.1	75.9	62.6	56.0
Overexertion	38.6	67.2	61.8	56.4	75.0	55.0	50.0
Repetitive motion	8.8	27.4	30.5	23.1	32.7	27.7	26.7
Overexertion in lifting	26.4	40.5	39.9	28.2	38.2	30.1	22.8
Caught in object, equipment, material	7.9	25.1	21.9	27.2	25.4	21.5	20.9

¹ Incidence rates represent the number of injuries and illnesses per 10,000 full-time workers and were calculated as: (N/EH) x 20,000,000 where

I = number of injuries and illnesses

EH = total hours worked by all employees during the calendar year 20,000,000 = base for 10,000 equivalent full-time workers

(working 40 hours per week, 50 weeks per year). from work include those which result in days away from work wi

NOTE: Dashes indicate data that do not meet publication guidelines or data for incidence rates less than .05 per 10,000 full-time workers. The scientifically selected probability sample used in each year was one of many possible samples, each of which could have produced different estimates. A measure of sampling variability for each estimate is available upon request.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

² Days away from work include those which result in days away from work with or without restricted work activity.

³ Excludes farms with fewer than 11 employees.

⁴ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries. Data for Mining (Division B in the *Standard Industrial Classification Manual*, 1987 Edition) include establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.

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In 1996, air courier operations previously classified in Industry Groups 421, 422, 423, 452, 473, and 478 were reclassified to Industry Group 451. As a result, the 1996 and later estimates for these SIC's and Major Industry Groups 42, 45, and 47 are not comparable to those for prior years. In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for prior years.

Table 5. Nonfatal occupational illness incidence rates by industry and category of illness, 2001 Missouri

		Incidence rates per 10,000 full-time workers³									
Industry¹	SIC code²	Total cases	Skin diseases or disorders	Dust diseases of the lungs	Respira- tory condi- tions due to toxic agents	Poison- ing	Disorders due to physical agents	Disorders associ- ated with repeated trauma	All other occupational illnesses		
Private Industry⁴		61.2	4.9	0.2	1.8	0.9	2.4	44.1	7.0		
Manufacturing		203.5	12.1	0.6	3.0	2.8	8.7	163.4	12.9		
Durable goods		245.9	13.3	0.9	1.3	4.4	13.1	197.0	15.8		
Lumber and wood products	24	23.1	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	22.2	0.9		
Furniture and fixtures	25	202.5	8.8	(⁵)	0.7	(⁵)	5.9	166.4	19.9		
Stone, clay, and glass products	32	111.4	10.6	(⁵)	(⁵)	(⁵)	2.9	30.7	67.2		
Primary metal industries	33	121.0	4.3	(⁵)	(⁵)	(⁵)	8.5	105.7	2.6		
Fabricated metal products	34	96.9	0.3	5.0	2.5	(⁵)	2.2	76.7	10.6		
Industrial machinery and equipment	35	96.9	15.2	(⁵)	(⁵)	(⁵)	1.6	76.5	3.9		
Electronic and other electric equipment	36	148.8	9.5	0.4	0.4	1.1	1.8	128.3	7.1		
Transportation equipment	37	664.8	32.1	0.4	3.1	17.4	46.0	535.6	30.5		
Instruments and related products	38	68.7	(⁵)	(⁵)	1.5	1.5	(⁵)	65.8	(⁵)		
Miscellaneous manufacturing industries	39	70.9	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	59.5	11.3		
Nondurable goods		146.7	10.6	0.1	5.1	0.6	3.0	118.2	9.1		
Food and kindred products	20	273.0	17.1	0.2	4.1	0.6	2.6	231.6	16.7		
Printing and publishing	27	27.5	0.8	(⁵)	(⁵)	(⁵)	0.3	25.9	0.5		
Chemicals and allied products	28	85.0	8.7	0.4	0.4	2.1	(⁵)	71.0	2.5		
Rubber and miscellaneous plastics	30	171.8	16.7	(⁵)	30.7	(⁵)	14.1	96.8	14.1		

¹ Totals include data for industries not shown separately.

EH = total hours worked by all employees during the calendar year 20,000,000 = base for 10,000 equivalent full-time workers

(working 40 hours per week, 50 weeks per year).

NOTE: Because of rounding components may not add to totals.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State

² Standard Industrial Classification Manual, 1987 Edition.

³ Incidence rates represent the number of illnesses per 10,000 full-time workers and were calculated as: (N/EH) x 20,000,000 where

⁼ number of illnesses

⁴ Excludes farms with fewer than 11 employees.

⁵ Incidence rate less than 0.05.

⁻⁻ Indicates data not available.